

WHAT IS CLAIMED IS:

1-62. (Cancelled)

63. (Currently Amended) An exposure apparatus, comprising:

first exposure means for illuminating a predetermined mask with light of a predetermined wavelength under a first illumination condition, to print a first pattern on a predetermined exposure region; and

second exposure means for illuminating the mask with light of the predetermined wavelength under a second illumination condition, different from the first illumination condition, to print a second pattern on the predetermined exposure region,

wherein the mask has a desired pattern and an auxiliary pattern having a shape different from that of the desired pattern, and

wherein a first exposure by said first exposure means and a second exposure by said second exposure means are carried out prior to a development process.

64. (Currently Amended) An exposure apparatus, comprising:

first exposure means for illuminating a predetermined mask with light of a first sigma, to print a first pattern on a predetermined exposure region; and

second exposure means for illuminating the mask with light of a second sigma, different from the first sigma, to print a second pattern on the predetermined exposure region,

wherein the mask has a desired pattern and an auxiliary pattern having a shape different from that of the desired pattern, and

wherein a first exposure by said first exposure means and a second exposure by said second exposure means are carried out prior to a development process.

65. (Currently Amended) An exposure apparatus, comprising:

first exposure means for illuminating a predetermined mask with light of a first numerical aperture, to print a first pattern on a predetermined exposure region; and

second exposure means for illuminating the mask with light of a second numerical aperture, different from the first numerical aperture, to print a second pattern on the predetermined exposure region,

wherein the mask has a desired pattern and an auxiliary pattern having a shape different from that of the desired pattern, and

wherein a first exposure by said first exposure means and a second exposure by said second exposure means are carried out prior to a development process.

66. (Currently Amended) An exposure apparatus, comprising:

first exposure means for obliquely illuminating a predetermined mask, to print a first pattern on a predetermined exposure region; and

second exposure means for perpendicularly illuminating the mask to print a second pattern on the predetermined exposure region,

wherein the mask has a desired pattern and an auxiliary pattern having a shape different from that of the desired pattern, and

wherein a first exposure by said first exposure means and a second exposure by said second exposure means are carried out prior to a development process.

67. (Previously Presented) An apparatus according to any one of Claim 63, wherein the mask includes an opening pattern with a linewidth not greater than a resolution limit of an exposure apparatus to be used.

68. (Original) An apparatus according to Claim 67, wherein there are plural opening patterns juxtaposed with each other.

69. (Previously Presented) An apparatus according to Claim 67, wherein the mask includes a phase shift pattern.

70. (Original) An apparatus according to Claim 67, wherein there is an auxiliary pattern disposed adjacent to the opening pattern.

71. (Previously Presented) An apparatus according to any one of Claim 63, wherein the mask is illuminated with light from one of a KrF excimer laser, an ArF excimer laser and an F₂ excimer laser.

72. (Previously Presented) An apparatus according to any one of Claim 63, wherein the mask is projected by use of a projection optical system comprising one of a dioptric system, a catadioptric system and a catoptric system.

73. (Previously Presented) An apparatus according to any one of Claim 63, wherein the exposure wavelength of said first exposure means and the exposure wavelength of said second exposure means are substantially the same.

74. (Previously Presented) An apparatus according to any one of Claim 63, wherein exposures of the exposure region under different illumination conditions are performed simultaneously without mutual interference of lights in the different illumination conditions.

75. (Previously Presented) A device manufacturing method, comprising the steps of:
 exposing a wafer to a pattern on a mask by use of an exposure apparatus as recited in Claim 63; and
 developing the exposed wafer.

76-107. (Cancelled)

108. (Previously Presented) An apparatus according to Claim 63, wherein the illumination of the mask is performed with bright field illumination.

109. (Previously Presented) An apparatus according to Claim 64, wherein the illumination of the mask is performed with bright field illumination.

110. (Previously Presented) An apparatus according to Claim 65, wherein the illumination of the mask is performed with bright field illumination.

111. (Previously Presented) An apparatus according to Claim 66, wherein the illumination of the mask is performed with bright field illumination.

112-120. (Cancelled)

121. (Previously Presented) An apparatus according to Claim 63, wherein the exposure by said first exposure means produces a first region in which an exposure amount does not reach an exposure threshold value, while the exposure by said second exposure means produces a second region in which an exposure amount does not reach the exposure threshold value, and wherein the exposure threshold value is reached in at least a portion of the first and second regions as superposed with each other.

122. (Previously Presented) An apparatus according to Claim 64, wherein the exposure by said first exposure means produces a first region in which an exposure amount does not reach an exposure threshold value, while the exposure by said second exposure means produces a second region in which an exposure amount does not reach the exposure threshold value, and wherein the exposure threshold value is reached in at least a portion of the first and second regions as superposed with each other.

123. (Previously Presented) An apparatus according to Claim 65, wherein the exposure by said first exposure means produces a first region in which an exposure amount does not reach an exposure threshold value, while the exposure by said second exposure means produces a second region in which an exposure amount does not reach the exposure

threshold value, and wherein the exposure threshold value is reached in at least a portion of the first and second regions as superposed with each other.

124. (Previously Presented) An apparatus according to Claim 66, wherein the exposure by said first exposure means produces a first region in which an exposure amount does not reach an exposure threshold value, while the exposure by said second exposure means produces a second region in which an exposure amount does not reach the exposure threshold value, and wherein the exposure threshold value is reached in at least a portion of the first and second regions as superposed with each other.

125-133. (Cancelled)

134. (Previously Presented) An apparatus according to Claim 63, wherein the first and second patterns have different shapes.

135. (Previously Presented) An apparatus according to Claim 64, wherein the first and second patterns have different shapes.

136. (Previously Presented) An apparatus according to Claim 65, wherein the first and second patterns have different shapes.

137. (Previously Presented) An apparatus according to Claim 66, wherein the first and second patterns have different shapes.

138-185. (Cancelled)

186. (Previously Presented) A device manufacturing method, comprising the steps of:
 exposing a wafer to a pattern on a mask by use of an exposure apparatus as
recited in Claim 64; and
 developing the exposed wafer.

187. (Previously Presented) A device manufacturing method, comprising the steps of:
 exposing a wafer to a pattern on a mask by use of an exposure apparatus as
recited in Claim 65; and
 developing the exposed wafer.

188. (Previously Presented) A device manufacturing method, comprising the steps of:
 exposing a wafer to a pattern on a mask by use of an exposure apparatus as
recited in Claim 66; and
 developing the exposed wafer.

189-191. (Cancelled)